Remarks:

Reconsideration of the application is respectfully requested.

Claims 1, 4, 7 and 13 are presently pending in the application.

On page 2 of the above-identified Office Action, claims 1, 4 7, and 13 were rejected as allegedly being obvious under 35 U.S.C. § 103(a) over U. S. Patent No. 5,845,096 to Munguia ("**MUNGUIA**") in view of U. S. Patent No. 6,473,817 to Jeddeloh ("**JEDDELOH**").

Applicant respectfully traverses the above rejections.

I. Applicant's claims recite limitations, not present in the cited references.

A. Applicant's independent claims 1 and 7 recite, among other limitations, varying the criteria upon which a default master stipulation is based.

Applicant's presently pending independent claims 1 and 7 recite, among other limitations, selecting a default master based on variable criteria. For example, Applicant's claim 1 recites, among other limitations,

> "a default master selected from the plurality of units according to **a dynamically modifiable default-master stipulation, the default-master stipulation being based on variable criteria** selected from the group consisting of: . . ." [emphasis added by Applicant]

Applicant's independent claim 7 recites, among other limitations,

> "**varying the criteria** upon which the default master stipulation is based." [emphasis added by Applicant]

The specification of the instant application says the following about **dynamically** selecting a "**default-master**", on page 10, lines 5 - 23:

> "It is possible **during operation of the bus system**, that is to say **dynamically**, to set (modify) **which one of the units which can be used as the bus master is to be the default master**.
>
> **The unit used as default master is the bus master if and so long as there is no bus request from the units connected by means of the bus**.
>
> The unit which is bus master at the instant at which it needs the bus has the advantage that it is able to use the bus immediately, that is to say without a prior bus request. A unit which is not the bus master at the instant at which it needs the bus must first request the bus, which means that the required bus access is delayed by at least one bus cycle.
> Generally, the unit which needs the bus most frequently is stipulated as the default master. The unit which needs the bus most frequently can then access the bus most rapidly on average. Such a bus system operates very efficiently." [emphasis added by Applicant]

As such, Applicant's claimed invention of claims 1 and 7, selects a "**default-master**" (i.e., a default bus master) based on **dynamically** modifiable, **varying** criteria.

B. Applicant's independent claims 4 and 13 recite, among other limitations, making a selection based on a

"dynamically modified" default-master stipulation based on analysis of an actual program cycle and an analysis of an expected program cycle in the program-controlled unity.

Applicant's presently pending independent claims 13 recites a multimaster bus system including, among other limitations

> "selecting a default master from the plurality of units according to a **dynamically modified default-master stipulation** that selects, **based on** an analysis selected from the group consisting of an **analysis of an actual program cycle** in a program-controlled unit needing bus access and an **analysis of an expected program cycle** in the program-controlled unit, the default master from the group consisting of: . . ." [emphasis added by Applicant]

Similar language is present in claim 4 of the instant application. More specifically, claims 4 and 13 call for, among other limitations, selecting a default master according to a "**dynamically modified**" (see A, above) "**default-master**" stipulation **based on analysis of an actual program cycle and an analysis of an expected program cycle in the program-controlled unit**.

II. The references cited in the Office Action, fail to teach or suggest Applicant's claimed invention.

A. Neither the MUNGUIA reference, nor the JEDDELOH reference, alone or in combination, teach all of the limitations of Applicant's independent claims 1 and 7 including, among other limitations, varying the criteria upon which a default master stipulation is based.

The **MUNGUIA** reference neither teaches, nor suggests, varying the criteria upon which a default master stipulation is based. In fact, the Office Action states, "Munguia does not expressly mention that the criteria is variable." However, the Office Action goes on to cite the **JEDDELOH** reference as allegedly teaching "assigning priority in a bus access scheme that is variable (e.g. col. 5, lines 31-38)." The Office Action further states:

> "It would have been obvious to combine Jeddeloh with Manguia because Jeddeloh teaches a more flexible approach to priority allocation by introducing a flexible policy, while Munguia readily acknowledges that additional criteria may be used in his system (col. 4, lines 54 - 58). Therefore, it would have been obvious one [sic] of ordinary skill in the art to combine Jeddeloh with Munguia to obtain the claimed invention."

Applicant respectfully traverses the allegation made in the Office Action that Applicant's independent claims 1 and 7 are rendered obvious by the combination of **MUNGUIA** with **JEDDELOH**. More particularly

Clearly, as stated in the Office Action, **MUNGUIA** does not disclose a "**default-master**" selected from the plurality of units according to a **dynamically modifiable default-master stipulation** that is based upon **variable criteria** as recited in claim 1 or **varying** the criteria in claim 7 of the instant application.

As stated in the previous Response to the Office Action, the **JEDDELOH** reference further fails to teach or suggest Applicant's particularly claimed selection of a **"default-master"** as required by claims 1 and 7.

More specifically, **JEDDELOH** discloses a bus arbitration method that regulates access to a common bus by a plurality of requesting devices **according to a priority rank**, **NOT** by "selecting a default-master … according to a default-master stipulation" as recited in Applicant's claims.

The "ranked" device of **JEDDELOH** is not equivalent to Applicant's claimed **"default-master"**. **JEDDELOH** never sets anything akin to Applicant's claimed **"default-master"**.

As stated in the instant application, page 10, lines 10 - 12, in Applicant's claimed system, **"[the] unit used as a default master is the bus master if and so long as there is no bus request from the units connected by means of the bus"**.

The system of **JEDDELOH** includes consideration of a weighted bandwidth in assigning the priority rank to the requesting devices. "In addition to data transfer speed, the desired weighted bandwidth may also reflect the data transfer size,

number of requests or latency requirements associated with the device or a combination of these and other factors" (**JEDDELOH,** Col. 4, lines 27-30). In this manner, the priority rank of **JEDDELOH** is used to grant a requesting device access to the bus. For example, the **JEDDELOH** reference states:

> When multiple bus mastering devices 56A-56N **request** access to the bus at the same time, the arbiter logic 52 uses the priority rank of each device to determine which of the bus mastering devices shall access the bus 54. Once **access to the bus** 54 is granted **to the requesting device with the highest priority rank**, the selected device **executes one bus transfer** and **relinquishes control of the bus** 54. (Col. 4, Lines 43-52).

As such, the device with the highest priority rank as described in **JEDDELOH** clearly does not function as a default master. **JEDDELOH** only takes the ranking into account **when multiple bus mastering devices request access to the bus at the same time.** Then, in **JEDDELOH**, upon selection of "**the requesting device with the highest priority rank**," the system described in **JEDDELOH** does **NOT** regard the selected device as Applicant's "**default-master**". Rather **JEDDELOH** clearly states that the selected device will execute "one bus transfer" and relinquish control of the bus.

As such, the adjustment of the desired weighted bandwidths in **JEDDELOH** which help determine the "ranking" of a device, is not analogous to Applicant's claimed dynamically modifiable **default-master stipulation** based on a variable (claim 1) or varying (claim 7) criteria. As such, **JEDDELOH** fails to teach

or suggest Applicant's particularly claimed "**default-master**" and **default-master stipulation based on variable criteria,** and as such cannot be used to supply such limitation, to the **MANGUIA** reference.

As such, it is believed that Applicant's claims 1 and 7 are patentable over the **MANGUIA** and **JEDDELOH** references, alone or taken in combination with each other.

B. Neither the MUNGUIA reference, nor the JEDDELOH reference, alone or in combination, teach all of the limitations of Applicant's independent claims 4 and 13 including, among other limitations, making a selection based on a "dynamically modified" default-master stipulation based on analysis of an actual program cycle and an analysis of an expected program cycle in the program-controlled unity.

With respect to Applicant's claims 4 and 13, the Office Action of October 8, 2004, states as follows:

> "Regarding claims 4 and 13, Munguia discloses a multimaster bus system and method comprising a bus, a plurality of units and a default master (Figure 1), the default master selected from the group consisting of particular units with weighting based on performance criteria (col. 4, lines 54 - 58), and the stipulation based on expected and actual analysis of the program cycle of the unit (e.g., col. 4, lines 58 - 62). While Munguia does not expressly disclose the need to access the bus frequently or rapidly, these limitations are disclosed by Jeddeloh. Jeddeloh discloses weighting criteria that include a particular unit that is expected to need to access the bus frequently, and a particular unit that is expected to need to access the bus rapidly (col. 4, lines 24 - 30)"

Applicant respectfully traverses the above statement alleging what is shown by **MANGUIA** and **JEDDELOH**. Accordingly, Applicant further respectfully traverses the rejection of Applicant's claims 4 and 13, based on a combination of **MUNGUIA** with **JEDDELOH**.

More specifically, the **MUNGUIA** reference discloses a system and method for determining upon which peripheral component to "park" the PCI bus or similar shared multi-master bus. The **MUNGUIA** system does not merely grant access to the PCI bus to the last peripheral component to have accessed the PCI, but applies an arbitration system based on **fixed criteria** that is adaptive according to **requests** by each of the peripheral components for access to the PCI bus. More specifically, one embodiment of **MUNGUIA** grants the peripheral component **which requests** access to the PCI bus most often access to the PCI bus, when no other peripheral component is **requesting** access to the PCI bus (Col. 2, Lines 34-62). In this manner the **MUNGUIA** reference "parks the PCI bus on the peripheral component which has, in the past, **requested** access to the PCI bus most often" (emphasis added by Applicant, Col. 2, Line 39-44).

The **MUNGUIA** system does not, among other limitations, select a **"default master"** using **dynamically modifiable default-master**

stipulation based on an analysis selected from the group consisting of an ***analysis of an actual program cycle*** in a program-controlled unit that needs bus access and an **analysis of an expected program cycle.**

Col. 4, of **MANGUIA**, lines 58 - 62 are pointed to in the Office Action as allegedly disclosing Applicant's particularly claimed ***group*** used to dynamically modify the **default master stipulation.** Applicant respectfully disagrees. Referring to the entire paragraph containing the cited matter, col. 4, line 50 - col. 5, line ,3 of **MANGUIA** reads as follows:

> Referring yet again to FIG. 2, in one embodiment, priority encoder 206 is adapted to receive additional weighting criteria. In such an embodiment, additional weighting criteria such as, for example, user inputted criteria is used to adjust the determination as to which of the peripheral components will have the PCI bus parked thereon. Such additional weighting criteria include, but are not limited to, the importance of the requesting peripheral component, the length of time the peripheral component requires access to the PCI bus, and the like. **As an example, assume that a particular peripheral component, "component X", is known to typically request access to the PCI bus seven consecutive times and then not request access again for an extended period of time. Hence, after all seven consecutive requests have been made by component X, it would not be prudent to park the PCI bus on component X. By importing such additional weighting criteria in priority encoder 206, the PCI bus would not be parked on component X even when seven of the eight entries in history buffer 202 are requests for PCI access by component X.** The present invention intelligently determines which peripheral component will have the PCI bus parked thereon." [emphasis added by Applicant]

As such, the decision whether to "park" a particular peripheral on the bus of **MANGUIA**, is **NOT** the selection of a "**default-master**", as claimed by Applicant. As such, **MANGUIA** does not select a "**default-master**" based on **default master stipulation** based upon the **analysis of** **an actual program cycle and an expected program cycle**.

In contrast, the instant application selects a "**default-master**" (see section IA for the definition of a **default-master**) based on criteria that are based upon the **analysis of** **an actual program cycle and an expected program cycle** as recited in claims 4 and 13. The analysis between actual use and expected use of a program cycle allows for a more accurate consideration of bus conditions before selecting the bus master.

Clearly, as described above in section IIA, **JEDDELOH** does not select "a default master according to a dynamically modified default-master stipulation" as recited in claim 13. Moreover, **JEDDELOH** does **NOT** select the **default master** according to a dynamically modifiable default-master stipulation that is **based on analysis of an actual and an expected program cycle of the program-controlled unit** as recited in claims 4 and 13 of the instant application.

Rather **JEDDELOH** determines which bus-mastering device should access the bus according to the priority rank and weighted bandwidth for each bus-mastering device. Thus, the devices 56A-56N are not the same as the "default master selected … according to a dynamically modifiable default-master stipulation" as recited in claims 4 and 13 of the instant application. **JEDDELOH** is, therefore, not combinable with **MANGUIA** as suggested in the Office Action. Both references fail to teach or suggest, Applicant's particularly claimed **dynamically modifiable default master stipulation** of claims 4 and 13. Applicant believes that the present claims 4 and 13 are patentable over the **JEDDELOH** and **MANGUIA** references.

III. Conclusion.

As shown above, neither the **JEDDELOH** or **MANGUIA** references teach or suggest all of the features of Applicant's particularly claimed invention. More specifically, both **JEDDELOH** and **MANGUIA** fail to teach, among other limitations, at least the particularly claimed **default master stipulation based on variable criteria** claimed in Applicant's claims 1 and 7; and Applicant's particularly claimed dynamically modifiable **default master stipulation based on analysis of an actual and an expected program cycle** of Applicant's claims 4 and 13.

It is accordingly believed that none of the references, whether taken alone or in any combination, either show or suggest the features of the pending claims. Claims 1, 4, 7 and 13 are, therefore, believed to be patentable over the art.

In view of the foregoing, reconsideration and allowance of claims 1, 4, 7 and 13 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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